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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/407,594	09/28/1999	GARY M. KING	PO9-99-147	2954

7590 01/04/2005

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EXAMINER

PHAM, THOMAS K

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/407,594

Applicant(s)

KING ET AL.

Examiner

Thomas K Pham

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-14, 16-25 and 27-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8, 9, 18, 19, 29 and 30 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 10-14, 16, 17, 20-25, 27, 28 and 31-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. In view of the appeal brief filed on 10/28/2004, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Quotations of U.S. Code Title 35

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim Rejections - 35 USC § 103

6. Claims 1-4, 6-7, 10-14, 16-17, 20-25, 27-28 and 31-34 are rejected under 35 U.S.C.

103(a) as being unpatentable over U.S. Patent No. 6,453,344 ("Ellsworth") in view of U.S.

Patent No. 6,260,068 ("Zalewski").

Regarding claims 1, 11, 21 and 22

Ellsworth teaches managing logical processors of a computing environment, comprising:

configuring a logical partition of said computing environment with one or more logical

processors (col. 6 lines 1-5, "the user of the ... I/O Configuration"); dynamically adjusting the

configuration of the logical partition (col. 5 lines 1-7, "Dynamic CPU ... unwanted downtime")

but does not show the automatically evaluating workload of the logical partition and

automatically determining therefrom that said configuration of the logical partition is to be

adjusted. However, Zalewski teaches a partition is automatically evaluating its workload based

upon a request from other partition for available resource (col. 4 lines 60-65, "a first operating

system ... into an idle state") and automatically determining therefrom whether it (the partition)

can transfer a resource to the requesting partition (col. 4 lines 62-66, "In response to this request

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... into an idle state” and col. 29 lines 2-6, “After an APMP system is ... without system administrator participation” [Note: the partition’s configuration is inherently adjust when it migrates or transfers its resource to another partition]) for the purpose of sharing available resources within a community of partitions. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate dynamic system of Zalewski with the logical processors environment of Ellsworth because it would provide for the purpose of sharing available resources within a community of partitions.

Regarding claims 2, 12 and 23

Zalewski teaches dynamically adjusting is in response to workload of said logical partition (col. 29 lines 39-41, “The migration process operates ... begin using the resource”).

Regarding claims 3, 13 and 24

Ellsworth teaches dynamically adjusting comprises increasing a number of logical processors allocated to said logical partition (col. 5 lines 24-31, “the multiprocessor ... a pool as server 2-4”).

Regarding claims 4, 14 and 25

Ellsworth teaches dynamically adjusting comprises decreasing a number of logical processors allocated to said logical partition (col. 6 lines 50-54, “the logical processor ... remains shared”).

Regarding claims 6, 16 and 27

Zalewski teaches the determination is performed at a plurality of time intervals (col. 26 lines 49-58, “Any instance may examine ... is considered dead or disinterested”).

Regarding claims 7, 17 and 28

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Ellsworth teaches the algorithm steps for dynamic CPU configuration (col. 7 line 42-44) for the purpose of calculating the number of logical processors. Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention that there is at least one predefined equation involved as part of the algorithm presented by Ellsworth for the purpose of calculating the number of logical processors based on the number of physical CPUs and the offline/online processors currently exist in the system.

Regarding claims 10, 20 and 31

Zalewski teaches comparing result times of a selected processor with the time thresholds to determine whether the adjustment is to be made (col. 27 lines 8-20, “Every clock tick, after incrementing ... additional responsibilities are dropped”).

Regarding claims 32, 33 and 34

Ellsworth teaches dynamically adjusting the configuration of the logical partition without negotiating with another logical partition of the computing environment (col. 5 lines 15-22, “the multiprocessor system ... within the server pool”).

Response to Arguments

In the remark the applicant argues that cited reference fails to disclose:

- “automatically evaluating workload of the logical partition and automatically determining therefrom that the configuration of the logical partition is to be adjusted” as to claims 1, 11, 21 and 22.

In response to applicant's argument,

It is noted that prior art Zalewski (6,260,068) teaches in column 4 lines 56-66:

“resource migration is carried out under a "push" model in which resources are controlled by an owning partition and must be released by that partition before they can be migrated to another partition. In accordance with this model, a first operating system instance which requires a resource first requests the resource from a second instance. In response to this request, the second instance determines whether it can spare the resource, and if so, begins to bring the resource into an idle state. The resource is transferred when the second instance stops using the resource.”

In response to a request for sharing of resources from other partitions, a partition automatically determines/evaluates whether it can spare one or more of its resources. It is inherent to one or ordinary skill in the art that the determination must evaluate how much of a workload it currently handles before it can give up an available resource. Furthermore, if a resource is available to be transfer to other partitions, the partition must adjust its own configuration by way of stoping the usage of the resource, and adjusting accordingly the allocation of the remaining resources after completing the migration. Therefore, it is clear that after the evaluation and transferred of an available resource, the configuration of the partition is automatically adjusted. Thus, the limitations are met by the reference.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (571) 272-3689, Monday - Thursday from 6:30 AM - 5:00 PM EST or contact Supervisor *Mr. Anthony Knight* at (571) 272-3687.

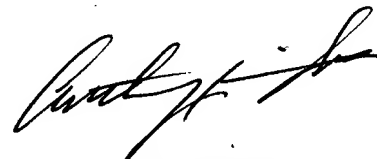
Any response to this office action should be mailed to: **Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450**. Responses may also be faxed to the **official fax number (703) 872- 9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas Pham
Patent Examiner

TP

December 23, 2004



Anthony Knight
Supervisory Patent Examiner
Group 3600